

## SECTION 204—CLASS 2, CLASS 3, AND CLASS 4 EXCAVATION

**204.1 DESCRIPTION**—This work is excavation for ditches, stream channels, culverts, drains, and structures. The three classes of excavation include the following, as shown on the drawings or the [Standard Drawings](#).

(a) **Class 2 Excavation.** Excavation for inlet, outlet, and parallel ditches; stream channels; structures removed below the ground surface and not replaced with new structures; spillways; and half-circle pipe.

(b) **Class 3 Excavation.** Excavation for new grade separation and drainage structures, new retaining walls, abutments, piers, and wingwalls.

(c) **Class 4 Excavation.** Excavation for pipe culverts; pipe-arches; metal plate pipe; metal plate pipe-arches; standard endwalls for pipe culverts and pipe-arches; and excavation in excess of the standard depth for pavement base drains, pipe underdrains, subsurface drain outlets, and subgrade drains.

### 204.3 CONSTRUCTION—

(a) **Foundations.** Notify the Representative 2 weeks in advance of excavation for structures so that cross-sections may be obtained. Excavate to a depth that provides a satisfactory foundation, as directed. Do not disturb the foundation area to the extent that it requires removal of additional material to provide a satisfactory bearing. Compact direct load bearing foundation to the original bearing capacity as specified in [Section 206.3\(b\)](#). Do not place concrete or masonry until the foundation area has been accepted.

(b) **Drilling and Blasting.** Drill and blast to complete the excavation to the required lines, with the least disturbance to remaining material. Do not blast within 1.5 meters (5 feet) of the foundation bearing elevation. Remove remaining rock to bearing elevation using mechanical means.

(c) **Bracing and Shoring.** [Section 203.3\(h\)](#)

(d) **Cofferdams.** Drive timber or metal sheeting to a depth below the bottom of foundation, substantially braced in all directions to form a cofferdam, when required, allowing the foundation area to be pumped reasonably free of water while concrete or masonry is being placed. The Representative may require the cofferdam to be sealed below the foundation with sufficient concrete so that it may be pumped reasonably dry where the foundation area is of sandy or other porous materials. Remove sheeting and bracing when no longer required, unless otherwise indicated or directed.

(e) **Backfilling.** Backfill spaces excavated for, but not occupied by, structures with acceptable material as specified in [Section 206.3\(b\)](#).

(f) **Ditch and Stream Channel Slopes.** Trim slopes neatly to the lines indicated. Do not remove or excavate any material beyond lines indicated, without written authorization from the Representative.

(g) **Topsoil.** Dispose of or utilize topsoil removed in Class 2 Excavation as specified in [Section 203.3\(g\)](#)

(h) **Suitable Material Required for Embankment and Backfill.** [Section 203.3\(j\)](#)

(i) **Unsuitable and Surplus Material.** [Section 203.3\(k\)](#)

**204.4 MEASUREMENT AND PAYMENT—Cubic Meter (Cubic Yard)**

Measured, using the methods specified in [Section 203.4\(a\)2](#), for the class of excavation indicated.

When directed to perform excavation below the indicated structure foundation elevation, the Department will pay for excavation as additional work, as specified in [Section 110.03\(b\)](#), to a maximum depth of 610 mm (2 feet), and as extra work, as specified in [Section 110.03\(c\)](#), beyond a depth of 610 mm (2 feet).

The Department will not pay for material removed or excavated in advance of obtaining cross-sections, unless written authorization by the Representative is first obtained.